

Amendments to the Claims:

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims:

1. (currently amended) A method of detecting a component of interest, the method comprising:
 - (a) providing one or more nanowires, which nanowires comprise one or more functional ~~group-groups~~ comprising a hairpin oligonucleotide, which functional group undergoes a change in charge in the presence of the component of interest;
 - (b) contacting the one or more nanowires with a solution comprising the component of interest; which component produces the change in charge in the functional group, which change in charge results in a detectable signal; and,
 - (c) detecting the signal, thereby detecting the component of interest.
2. (Original) The method of claim 1, wherein the component of interest comprises an enzyme, a nucleic acid, or a protein.
- 3-7. (Cancelled)
8. (previously presented) The method of claim 1, wherein the hairpin comprises a first end, a second end, and a central portion, wherein the first end and the second end are complementary to each other and the central portion is complementary to the component of interest, and wherein the first end comprises a charge moiety that is proximal to the nanowires; wherein binding the component of interest to the central portion of the hairpin oligonucleotide unfolds the hairpin, thereby moving the charge moiety away from the nanowires, producing the change in charge.
9. (Original) The method of claim 8, wherein the charge moiety comprises a latex bead comprising a carboxylate or amine surface, a nucleic acid, a

highly charged polypeptide, a charged polymer, one or more negatively charged nucleotides, or a metal nanocrystal.

10-15. (Cancelled)

16. (Original) A method of detecting glucose, the method comprising:

- (a) providing one or more nanowires that comprise glucose oxidase immobilized thereon or proximal thereto;
- (b) contacting the nanowires with a test solution; wherein any glucose present in the test solution is oxidized by the glucose oxidase resulting in a change in pH of the test solution, wherein the change in pH produces a signal in the nanowires; and,
- (c) detecting the signal, thereby detecting the glucose in the test solution.

17-81. (Cancelled)

82. (previously presented) The method of claim 1, wherein the hairpin oligonucleotide has a first end, a second end and a central portion, wherein the central portion binds the component of interest.

83. (previously presented) The method of claim 82, wherein the component of interest is a nucleic acid and wherein the central portion is complementary to the nucleic acid.

84. (previously presented) The method of claim 1, wherein the hairpin oligonucleotide unfolds to produce the change in charge.

85. (previously presented) The method of claim 1, wherein the one or more nanowires comprise a nanowire array.

86. (previously presented) The method of claim 1, wherein the one or more nanowires are positioned in one or more microwells or within a microfluidic device.

87. (previously presented) The method of claim 1, wherein the component of interest comprises a cellular component.

88. (previously presented) The method of claim 1, wherein the change in charge comprises a redistribution of charge.

89. (previously presented) The method of claim 1, wherein the solution comprises one or more cells, one or more cellular fragments, a tissue sample, a cell lysate, or a blood sample.

90. (previously presented) The method of claim 16, wherein the test solution comprises one or more cells, one or more cellular fragments, a tissue sample, a cell lysate, or a blood sample.

91. (previously presented) The method of claim 16, wherein the one or more nanowires are positioned in one or more microwells or within a microfluidic device.

92. (previously presented) The method of claim 16, wherein the one or more nanowires comprise a nanowire array.